

MODIS IOT Weekly Report

Mission Operations Days: 2001/034 to 2001/040

February 2, 2001 20:00:00 GMT to February 9, 2001 20:00:00+ GMT

Terra Spacecraft and MODIS Instrument Status:

Terra (AM-1) is in Normal Mode

MODIS is in B-side Science Mode

Blackbody	A Off; B On	Nominal
Calibration Electronics	A Off; B On	Nominal
Control Processor	A Off; B On	Nominal
Door: Nadir	Unlatched, open	Nominal
Space View	Unlatched, open	Nominal
Solar Diffuser	Unlatched, closed	Nominal
FDDI Formatter	A Off; B On	Nominal
FDDI Port	A On; B Off	Nominal
FIFO Memory	1 & 2 Off; 3 & 4 On	Nominal
Format Processor	A Off; B On	Nominal
Power Supply: 1	Off	Nominal
2	On	Nominal
PV FPAs: VIS	A Off; B On	Nominal
NIR	A Off; B On	Nominal
SMIR	A Off; B On	Nominal
LWIR	A Off; B On	Nominal
PC FPA: LWIR	A Off; B On	Nominal
Radiative Cooler:		
Outgas Heaters	All Off	Nominal
LWIR FPA Heater	On	Nominal
SMIR FPA Heater	Off	Nominal
Scan Assembly	A Off; B On	Nominal
SDSM	Off	Nominal
SRCA	Off	Nominal
Survival Heaters: PS1	Enabled	Nominal
PS2	Enabled	Nominal
Timing Generator	A Off; B On	Nominal
Flight Software	Rev BD + 2 patches	Nominal
Inhibit Ids Set	None	Nominal

TMONs enabled

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Nominal

This Week's Completed MODIS Activities:

Friday, February 02, 2001

None

Saturday, February 03, 2001

None

Sunday, February 04, 2001

None

Monday, February 05, 2001

None

Tuesday, February 06, 2001

None

Wednesday, February 07, 2001

None

Thursday, February 08, 2001

2001/039	15:02:55	ATC	OA-16: SDSM Screened
2001/039	15:50:51 - 16:24:24	ATC	OA-19: SRCA Full Radiometric
2001/039	16:41:48	ATC	OA-15: SDSM Open

Friday, February 09, 2001

2001/040	14:52:39 - 15:44:18	ATC	OA-22: SRCA Full Spectral (Part 1)
2001/040	16:48:22 - 17:23:07	ATC	OA-22: SRCA Full Spectral (Part 2)
2001/040	18:10:24 - 19:01:40	ATC	OA-22: SRCA Full Spectral (Part 3)
2001/040	20:04:25 - 20:42:23	ATC	OA-22: SRCA Full Spectral (Part 4)

This Week's Scheduled MODIS Activities Not Completed:

None

Upcoming MODIS Events:

Saturday, February 10, 2001

None

Sunday, February 11, 2001

None

Monday, February 12, 2001

MODIS Lunar Calibration Roll Maneuver

2001/043	06:05:00 - 06:25:00	RT	FOT Procedure: ADC_IRU_TO_HI_RATE
2001/043	07:16:18	ATC	FR to Night Rate 00:03:23 early roll compensation
2001/043	07:22:57	ATC	S/C begins slew to Roll angle of -7.68 degrees
2001/043	07:27:27	ATC	S/C completed slew to Roll angle of -7.68 degrees
2001/043	07:22:57 - 07:27:21	ATC	SCIABNORM flag set
2001/043	07:27:23 - 07:34:09		MODIS Roll Activity
	07:27:23		FR to Day Rate
	07:27:25		SCIABNORM flag set
	07:27:27		FR PCDCR set
	07:27:29		FR PVDCCR set
	07:27:31		FR Sector Rotation (-3072)
			SV Lunar Viewing
	07:34:01		FR Sector Rotation (0 - nominal)
	07:34:03		FR PVDCCR cleared
	07:34:05		FR PCDCR cleared
	07:34:07		SCIABNORM flag cleared
	07:34:09		FR to Night Rate
2001/043	07:34:11 - 07:37:55		SCIABNORM flag set
2001/043	07:34:31	ATC	S/C begins slew to nominal orientation degrees
2001/043	07:37:55	ATC	S/C completed slew to nominal orientation degrees
2001/043	07:49:55 - 08:14:55	RT	FOT Procedure: ADC_IRU_TO_LO_RATE
2001/043	08:12:29		FR to Day Rate 00:03:23 late roll compensation

2001/043 09:47:59 - 14:44:37 Field Campaign Scheduling "Black-Out"
No activities scheduled to support Field Campaign

Tuesday, February 13, 2001

None

Wednesday, February 14, 2001

None

Thursday, February 15, 2001

None

Friday, February 16, 2001

None

Maneuvers:

The next MODIS Lunar Calibration Roll Maneuver is planned for 2001/043, February 12th. See the scheduling notes above for details.

Note: the exact time the FOT takes the spacecraft out of fine pointing mode depends on the execution time of the related procedure (ADC_IRU_TO_HI_RATE). This will occur between 06:05 and 06:25. We won't know the precise time until it actually occurs. Later, the procedure (ADC_IRU_TO_LO_RATE) that returns the spacecraft to nominal fine pointing mode is performed. Once again, the precise time this occurs is not known, but it should occur during the scheduled 25-minute TDRSS contact. These exact times will appear in next week's weekly report.

MODIS Anomalies:

No formatter anomalies have been detected since switching to B-side science operations. The MODIS IOT is continuing to monitor changes with the radiative cooler temperatures and focal plane power.

General Instrument Comments:

MODIS is in Science Mode on the B-side with the SVD and NAD open, operating with the Formatter Resolution Flight Software Patches (FRFSP). No new events have been witnessed by the FRFSP since the B-Side Transition on DOY 2000/304.

MODIS Telemetry Trends:

The Radiative Cooler Intermediate Stage temperature has slowly been increasing since approximately day 2000/240. During this time the LWIR focal plane heater margin has been decreasing. The IOT is continuing to trend these telemetry mnemonics.

Temperature trends are correlating with the solar beta angle. This includes a steadying of the intermediate stage outgas temperature. This temperature is expected to increase again when the beta angle gets smaller.

Non-MODIS Significant Events:

None

Limited Life Item Status:

SRCA 10W Lamp #1: 181.7 of 500 hours
SRCA 10W Lamp #2: 140.5 of 500 hours

SRCA 10W Lamp #3: 149.7 of 500 hours
SRCA 10W Lamp #4: 61.5 of 500 hours

SRCA 1W Lamp #1: 556.7 of 4000 hours
SRCA 1W Lamp #2: 276.3 of 4000 hours

Solar Diffuser Door: 1525 of 3022 Movements
Nadir Aperture Door: 532 of 1316 Movements
Space View Door: 437 of 1316 Movements